

LEGEND:

	--- Not Cost Effective
	--- Cost Effective

TABLE 1

NON-INTERSTATE		
THREE SEAL COAT TREATMENTS		
		Estimated Design Life of HBP Surfacing (Est. Cost = \$200,000)
		20
Extended Service Life of 3R Struct. Overlay (Est. Cost = \$150,000 & 3 @ \$16,000)	1	\$180,100
	2	\$176,700
	3	\$173,200
	4	\$169,800
	5	\$166,400
	6	\$163,000
	7	\$159,500
	8	\$156,100
	9	\$152,700
	10	\$149,300

TABLE 3

PM MICRO SURFACING		
		Estimated Design Life of 3R Struct. Mill & Overlay (Est. Cost = \$167,600)
		20
Estimated Service Life of PM Micro Surfacing (Est. Cost = \$56,000)	1	\$213,300
	2	\$203,300
	3	\$193,500
	4	\$184,000
	5	\$174,600
	6	\$165,500
	7	\$156,600
	8	\$147,900
	9	\$139,300
	10	\$131,000

TABLE 2

INTERSTATE		
THREE SEAL COAT TREATMENTS		
		Estimated Design Life of HBP Resurfacing (Est. Cost = \$330,000)
		20
Extended Service Life of HBP Resurfacing (Est. Cost = \$330,000 & 3 @ \$21,000)	1	\$366,400
	2	\$358,900
	3	\$351,400
	4	\$343,800
	5	\$336,300
	6	\$328,800
	7	\$321,300
	8	\$313,700
	9	\$306,200
	10	\$298,700

TABLE 4

PM THIN LIFT OVERLAY		
		Estimated Design Life of 3R Structural Overlay (Est. Cost = \$150,000)
		20
Estimated Service Life of PM Thin Lift Overlay (Est. Cost = \$60,000)	1	\$200,800
	2	\$191,800
	3	\$183,100
	4	\$174,500
	5	\$166,200
	6	\$158,000
	7	\$150,000
	8	\$142,200
	9	\$134,600
	10	\$127,100

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TABLE 5

MINOR CPR		
		Estimated Design Life of Major CPR (Est. Cost = \$200,000)
		15
Estimated Service Life of Minor CPR (Est. Cost = \$20,000)	1	\$204,900
	2	\$190,100
	3	\$175,600
	4	\$161,300
	5	\$147,400
	6	\$133,600
	7	\$120,200
	8	\$106,900

TABLE 6

MINOR CPR (TWICE)		
		Estimated Design Life of Major CPR (Est. Cost = \$200,000)
		15
Estimated Service Life of First Minor CPR (Est. Cost = \$20,000)	1	\$166,600
	2	\$152,100
	3	\$137,900
	4	\$124,000
	5	\$110,300
	6	\$96,900
	7	\$83,700
	8	\$70,700

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TABLE 7

MINOR CPR (GRINDING)		Estimated Design Life of Major CPR (Est. Cost = \$200,000)	
		15	
Estimated Design Life of Grinding (Est. Cost = \$40,000)	1	\$224,900	
	2	\$210,100	
	3	\$195,600	
	4	\$181,300	
	5	\$167,400	
	6	\$153,600	
	7	\$140,200	
	8	\$126,900	

TABLE 8

MAJOR CPR		Estimated Design Life of PCC Reconstruction (Est. Cost = \$1,300,000)	
		30	
Estimated Service Life of Major CPR (Est. Cost = \$200,000)	1	\$1,436,600	
	2	\$1,375,200	
	3	\$1,315,600	
	4	\$1,257,800	
	5	\$1,201,700	
	6	\$1,147,200	
	7	\$1,094,400	
	8	\$1,043,000	
	9	\$993,100	
	10	\$944,600	

TABLE 9

HBP RESURFACING		Estimated Design Life of PCC Reconstruction (Est. Cost = \$1,300,000)	
		30	
Estimated Service Life of HBP Resurfacing (Est. Cost = \$330,000)	1	\$1,566,600	
	2	\$1,505,200	
	3	\$1,445,600	
	4	\$1,387,800	
	5	\$1,331,700	
	6	\$1,277,200	
	7	\$1,224,400	
	8	\$1,173,000	
	9	\$1,123,100	
	10	\$1,074,600	

TABLE 10

CPR & HBP RESURFACING		Estimated Design Life of PCC Reconstruction (Est. Cost = \$1,300,000)	
		30	
Estimated Service Life of CPR (Est. Cost = \$73,300 & \$330,000)	1	\$1,088,100	
	2	\$1,030,100	
	3	\$973,700	
	4	\$919,100	
	5	\$866,000	
	6	\$814,400	
	7	\$764,300	
	8	\$715,700	

Note: Tables 8, 9, and 10 for Major CPR, HBP Resurfacing, and Major CPR & HBP Resurfacing are provided for comparative purposes only. These strategies are not considered to be preventive maintenance strategies.

Example of Life Cycle Cost for Non-Interstate Three Seal Coat Treatments:

Life Cycle Cost Formula (Present Worth)

= 3R Structural Overlay Cost + [1st Seal Coat Cost * ((1 + Discount Rate)ⁿ - Yr Seal Coat Performed)] + [2nd Seal Coat Cost * ((1 + Discount Rate)ⁿ - Yr Seal Coat Performed)] + [3rd Seal Coat Cost * ((1 + Discount Rate)ⁿ - Yr Seal Coat Performed)] - [3R Structural Overlay Cost * (Estimated Service Life/Estimated Design Life) * ((1 + Discount Rate)ⁿ - Estimated Design Life)]

Life Cycle Cost Formula (Present Worth)

= \$150,000 + [\$16,000 * ((1 + .04)⁻²) + [\$16,000 * ((1 + .04)⁻¹⁰)] + [\$16,000 * ((1 + .04)⁻¹⁸)] - [\$150,000 * (n/20) * ((1 + .04)⁻²⁰)]

3R STRUCTURAL OVERLAY	
3R Structural Overlay Cost	\$150,000
Estimated Design Life	20
Discount Rate	4%
Life Cycle Cost	\$150,000

FIRST SEAL COAT	
1 st Seal Coat Cost	\$16,000
Yr Seal Coat Performed	2
Estimated Design Life	2
Discount Rate	4%
Life Cycle Cost	\$164,793

SECOND SEAL COAT	
2 nd Seal Coat Cost	\$16,000
Yr Seal Coat Performed	10
Estimated Design Life	2
Discount Rate	4%
Life Cycle Cost	\$175,602

THIRD SEAL COAT	
3 rd Seal Coat Cost	\$16,000
Yr Seal Coat Performed	18
Estimated Design Life	2
Discount Rate	4%
Life Cycle Cost	\$183,500